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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.: 10/092,170
Filed: March 06, 2002
Inventor:
John G. Kennedy

Title: System and Method for Determining Availability of an Arbitrary Network Configuration

§

Examiner: Hossain, Tanim M
Group/Art Unit: 2145
Atty. Dkt. No: 5681-10100

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office (Fax No. (571) 273-8300), on the date indicated below.

Robert C. Kowert
Printed Name

Signature

November 8, 2006
Date

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This brief is in reply to the Examiner's Answer dated September 8, 2006. Appellant respectfully requests that this Reply Brief be entered pursuant to 37 C.F.R. § 41.41 and considered by the Board of Patent Appeals and Interferences.

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REPLY

First Ground of Rejection:

Claims 1-15, 22-31 and 33-36 stand finally rejected under 35 U.S.C. § 102(e) as being anticipated by Chirashnya (U.S. Publication 2002/0019870) (hereinafter "Chirashnya"). Appellant traverses the rejection for at least the following reasons.

Regarding claim 1, Chirashnya does not teach updating an availability of a network system in response to identifying a failed component, nor does Chirashnya teach using configuration data obtained via system discovery to update the availability of the network system. Appellant's arguments from the Appellant's Appeal Brief filed May 24, 2006 regarding this rejection are herein incorporated by reference. As explained in Appellant's Appeal Brief, claim 1 recites, in part, a host system configured to "update an availability of the network system using the data indicative of the configuration of the plurality of network components in response to identifying the failed component" and "store data indicative of the availability of the network system." In rejecting claim 1, the Examiner asserted that Chirashnya teaches these limitations, and cites paragraphs 0034, 0047, 0048, 0051 and 0059 in support of this assertion. The Examiner is incorrect in this interpretation. Chirashnya does not teach, in the cited paragraphs or anywhere else, "updating an availability of a network system in response to identifying a failed component." In fact, Chirashnya does not even teach updating the availability of a network system at all, much less updating it in response to identifying a failed component and using data indicative of the configuration of the plurality of network components, as recited in claim 1.

In response to Appellant's previous arguments regarding claim 1 (on page 9 of the Final Action), the Examiner asserted that "in receiving an alarm indicating a fault in the network system, which sets forth which component failed, for example, the user of Chirashnya's system is alerted of the network's availability, by the very fact that the user knows which component failed, which constitutes a knowledge of the network system's

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availability". However, a user's being "alerted" to or "knowing" "which component failed" is clearly not the same as a host system "updating an availability of the network system" using data indicative of the configuration of the plurality of network components, as recited in claim 1.

In the Advisory Action mailed on February 1, 2006, the Examiner provided a somewhat different ground for rejecting claim 1, asserting that "by constructing a causal network based on the latest information gathered from any alarm (the update), probabilities of the components in the network failing are calculated, which constitutes "an availability of a network system"". The Examiner's latest interpretation of Chirashnya is also incorrect. Contrary to the Examiner's suggestion, computing an updated malfunction rate for an individual module or modules does **not** constitute "updating an availability of the network system". Nowhere does Chirashnya state that an availability of the network system is updated. The Examiner's assertion in the Advisory Action that "the collection of these parameters constitute network availability" is also incorrect. Updating malfunction rates of individual modules and/or identifying configuration changes does not mean that the availability of the network system is thereby somehow updated. Chirashnya does not teach updating or computing the availability of the network system anywhere. Nor does Chirashnya teach using configuration data obtained from a system discovery process to update the network system availability.

Further regarding claim 1, the Examiner incorrectly asserted that Chirashnya teaches "storing data indicative of the availability of the network" in paragraph 0019. However, while paragraph 0019 teaches "gathering event reports", "receiving a report of a change in configuration of the system", "constructing a causal network", "maintaining a database in which the configuration is recorded" and "updating the database responsive to the report of the change in the configuration", it does not teach storing "data indicative of the availability of the network system". Neither recording changes to a network configuration in a database, nor constructing a "causal network", is the same as storing data indicating the availability of the network system.

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In his Answer, the Examiner disagrees with Appellant's argument that "in regard to claim 1, Chirashnya does not teach updating an availability of a network system in response to identifying a failed component, nor does Chirashnya teach using configuration data obtained via system discovery to update the availability of the network system." The Examiner submits that Chirashnya discusses the maintenance of up-to-date topology information regarding the network as a whole, which constitutes "the updating of an availability." The Examiner is incorrect. **A collection of topology information does not constitute "an availability of the network system" per the plain meaning of this term and consistent with how this term is used in Appellant's specification.**

Appellant asserts that the terms "an availability of the network system", "the availability of the network system", and "the system availability" are not generic terms that may refer to any individual piece of data or any collection of data that is related to the availability of a network system or its components, as suggested by the Examiner's remarks. **Instead, a specific meaning for these terms is defined in Appellant's specification.** For example, paragraph [0020] of the published application is as follows:

> [0020] FIG. 1 shows one embodiment of a method of calculating the availability of a network system or subsystem. The availability calculation may determine the instantaneous availability of the network system. The instantaneous availability of a system is the probability that the system is available (i.e., in a state to perform a required function) under a given set of circumstances at a given time. In order to perform the availability calculation, system discovery is performed at 10. System discovery generates data indicative of the configuration of components included within a network system, as is described below. At 12, a component failure is detected. In response to detection of a component failure, the system availability (e.g., the instantaneous availability) is calculated, as shown at 14, using the data generated at 10. Data indicative of the system availability is stored, as indicated at 16. (emphasis added.)

Similarly, the abstract describes: "computing an availability (e.g., by calculating the instantaneous availability) of the network system." Several paragraphs describe recalculation (i.e., updating) the system availability in response to failures or other system events. For example, paragraph [0036] states, "In response to a component

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failure, the system availability agent may calculate the system availability using the system discovery data." See also paragraphs [0023], [0030], and [0027].

As evidenced by the passages above, the terms "an availability of the network system", "the availability of the network system", and "the system availability" specifically refer to a calculated indication of the availability of the network system as a whole (i.e., the probability that the system is in a state to perform a required function under a given set of circumstances at a given time) and as calculated according to various methods, such as those described in the specification. No alternate definitions of these terms are included in Appellant's specification. Appellant respectfully submits that case law has repeatedly held that the inventor's practitioner and/or the inventor may be their own lexicographers and grammarians. *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1558, 220 USPQ 303, 306 (Fed. Cir. 1983); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 219 USPQ 1137, 1140 (Fed. Cir. 1983); *Autogriro Co. v. U.S.*, 384 F.2d 391, 397, 155 USPQ 697, 702 (Ct. Cl. 1967). Thus, Appellant asserts that Appellant's claims, including these terms, must be examined in light of the definitions above.

Moreover, although Examiners may interpret a claim as broadly as its terms reasonably allow, such interpretation cannot be inconsistent with the specification. M.P.E.P. § 2111. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *Id.* (emphasis added). *See also, Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). The Examiner's interpretation of a collection of network topology information being equivalent to "an availability of the network system" would clearly be inconsistent with how this phrase is used in Appellant's specification. Moreover, the broadest reasonable interpretation must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). One skilled in the art apprised of Appellant's specification would not interpret "an availability of the network system" to be the same as a collection of network topology information as described in Chirashnya. Even by the plain meaning of the

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claim terminology, without more, a mere collection of network topology information does not indicate an availability of the network system as a whole.

Therefore, the Examiner's remarks in his Answer, "the maintenance of up-to-date topology information regarding the network as a whole, which constitutes the updating of an availability" are clearly incorrect. Merely keeping topology information up-to-date, as in Chirashnya, clearly does not constitute "updating an availability of the network system" according to the definition of "an availability of the network system" provided by Appellant's specification.

The Examiner, in his Answer, further suggests that updating a Bayesian network of failure rates in response to a detected fault, as described in paragraph [0010] also constitutes "updating an availability of the network system" in that "the fault affects the system as a whole, and as such, probabilities are calculated as a whole, which is the basis of Bayesian conditional probability." This is also inconsistent with the definition of "an availability of the network system" provided by Appellant's specification. The Bayesian network described in Chirashnya does not calculate the probability that the system is available to perform a required function, as the Examiner suggests. Instead, this network is used to diagnose the cause of a fault (and the probability that the correct cause is diagnosed) and to maintain estimated malfunction rates of each module. There is nothing in Chirashnya that discloses using any of the information used to build the Bayesian network, or the network itself, to "update an availability of the network system" as defined in Appellant's specification.

Similarly, the Examiner's remarks regarding the teachings of other portions of Chirashnya all describe updating the Bayesian network models to reflect configuration changes and malfunction rates of the individual modules. For example, the Examiner cites paragraph [0011], "these models completely and accurately reflect the actual, current network conditions..."; paragraphs [0019] and [0033], "the latest network configurations are stored in a database, such that they may be used to construct the causal network"; paragraph [0023], "the probabilities of other modules failing"; paragraphs

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[0047] and [0048], "monitoring of the network for devices not responding, statistics that may reflect abnormal functionality, and configuration changes"; paragraphs [0051] and [0052], "the database is then "updated automatically, in real time, to reflect any changes that occur, such as addition or removal of nodes"... reliability assessments take place, and the calculation of the malfunction rate of each module takes place"; and paragraphs [0061] and [0062], which describes the updating of the probability tables of the nodes. **None of these citations teaches updating "updating an availability of the network system" according to the definition of "an availability of the network system" provided by Appellant's specification.**

For at least these reasons, Appellant respectfully submits that claim 1 is not anticipated by Chirashnya, and is in condition for allowance. Independent claims 7, 23, 34 and 35 each also recite computing (or calculating) an availability of a network system using configuration data obtained via system discovery, and therefore the rejection of these claims is unsupported by the cited art for similar reasons as claim 1.

Regarding claim 2, contrary to the Examiner's assertion, Chirashnya does not teach using "the updated availability to calculate a risk of the network system becoming unavailable during one or more exposure periods following the failure and prior to a repair or replacement of the failed component, and storing data indicative of the risk". Appellant argued that the Examiner was mistaken in asserting that paragraphs [0024] and [0035] of Chirashnya teach this limitation. Neither of the cited paragraphs teaches the limitation in question. In an apparent reference to claim 2, on page 10 of the Final Action the Examiner asserted that "the calculation of a probability of the system's failure in Chirashnya constitutes a risk of the network system becoming unavailable during the exposure period", without citing a specific portion of Chirashnya in support. Neither paragraph 0024 nor 0035, nor any other portion of Chirashnya, however, teaches or suggests "calculation of a probability of the system's failure". Even if Chirashnya did teach such a calculation, however, the Examiner would be incorrect in the assertion that such a calculation is the same as "using the updated availability to calculate a risk of the network system becoming unavailable during one or more exposure periods following the

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failure and prior to a repair or replacement of the failed component", as recited in claim 2. Furthermore, Chirashnya also does not teach storing an indication of the calculated risk corresponding to the one or more exposure periods. Accordingly, Appellant asserts that claim 2 is clearly not anticipated by Chirashnya.

In his Answer, the Examiner disagrees with the above argument. The Examiner refers, as a singular example, to paragraph [0054] of Chirashnya, which "discusses the obtaining of malfunction probabilities, which may be presented in a variety of ways, such as with MTBF measurement, accompanied by a measure of confidence in the estimate." The Examiner suggests that "the availability is continually updating, and with it are the malfunction rates of the modules... As such, MTBF measurements and their related confidences constitute risk of the network system becoming unavailable." Appellant asserts that, as discussed above regarding claim 1, Chirashnya does not teach "the availability is continually updating" according to the definition of system availability provided by Appellant's specification. In fact, paragraph [0054] describes updating fault model 50, not an availability of the network system. Appellant asserts that the failure rates of individual modules and their related confidences do not constitute risk of the network system becoming unavailable, according to Appellant's definition of the network system's "availability," nor does Chirashnya describe calculating such a risk for the network system using the updated availability (according to Appellant's definition of its availability).

The Examiner also cites paragraph [0062], which discusses "updating the probability tables of the nodes based on the alarms, which then constitutes the storing of data indicative of the risk" (emphasis added). Appellant again asserts that updating these probability tables clearly does not constitute storing data indicative of the risk of the network system becoming unavailable, according to Appellant's definition of availability. Appellant further asserts that there is nothing in Chirashnya that teaches MTBF values are used in a calculation of this risk during one or more exposure periods following the failure and prior to a repair or replacement of the failed component, as recited in claim 2.

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For at least the reasons above, the rejection of claim 2 is not supported by the cited art and removal thereof is respectfully requested. Claims 8 and 24 also recite limitations using language similar to that of claim 2, and are therefore also not anticipated by Chirashnya for similar reasons.

Regarding claim 3, contrary to the Examiner assertion, Chirashnya does not teach "wherein the data indicative of the risk includes data indicative of a probability of the network system becoming unavailable during each of the one or more exposure periods". The Examiner incorrectly asserted that Chirashnya teaches this limitation in paragraph 0010. There is no teaching or suggestion in paragraph 0010 or anywhere else in Chirashnya of using an updated availability of a network system to calculate and store probabilities of the network system becoming unavailable during one or more exposure periods between the failure and a repair/replacement.

In his Answer, the Examiner submits that Chirashnya teaches "updating of failure probabilities of network components (paragraphs 0047, 0054, 0062, among others). If these components fail, an alarm is sounded and the components become available, which is then updated in the database of configuration information. The causal network also reflects this change in its probabilities of failure. Because the risk deals in malfunction rates, it indicates the probability that the network system may become unavailable." Appellant again asserts that updating probabilities of individual components or malfunction rates does not teach data indicative of a probability of the network system becoming unavailable, according to Appellant's definition, nor does Chirashnya describe data indicative of a risk calculated in the manner recited in claim 2. Accordingly, Appellant asserts that claim 3 is not anticipated by Chirashnya.

For at least these reasons, the rejection of claim 3 is not supported by the cited art and removal thereof is respectfully requested. Claims 9 and 25 are also not anticipated by Chirashnya for similar reasons.

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Regarding claim 4, contrary to the Examiner's assertion, Chirashnya does not teach "wherein the data indicative of the risk includes data indicative of an expected number of system failures per a given population for each of the one or more exposure periods". In rejecting claim 4, the Examiner cited paragraph 0026 of Chirashnya as teaching this limitation. As discussed in the Appeal Brief, the Examiner is mistaken. Paragraph 0026 teaches "failure rate distributions" for malfunctions of individual modules (see, e.g., paragraph 0023s, 0054), not "system failures" as recited in claim 4. Furthermore, paragraph 0026 does not teach failure rate distributions associated with each of one or more respective "exposure periods". In addition, Chirashnya teaches (e.g., in paragraph 0054) that "failure rates" are expressed as "mean time between failures (MTBF)", which is different from the "number of failures per a given population" for a given exposure period.

In his Answer, the Examiner suggests that Chirashnya teaches (in paragraphs [0053] and [0054]) "global fault information, where the distribution of expected rates of failure are used. As such, the probability of system failures per a given population (global, in this case) is constituted." Appellant again asserts that this collection of all possible malfunctions and their failure rates (as described by fault model 50), does not constitute the probability of system failures, and that this data is clearly not indicative of a risk calculated in the manner recited in claim 2.

The Examiner also submits, "The use of MTBF (Mean Time Between Failures) in conjunction with a confidence level related to it is indicative of an expected number of failures, where a high confidence in a given MTBF value is indicative of a higher probability of that system component failing at a given time. Based on the time period between the alarm occurring, and an action taking place (the claimed exposure period), the MTBF falling within the exposure period and its related confidence probability would be used to arrive at the number of expected failures during that exposure period." **Appellant asserts that, although it may be possible to use MTBF values to arrive at a number of expected failures, there is nothing in Chirashnya that teaches that they**

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are, in fact, used in this way. Therefore, Chirashnya cannot be said to anticipate claim 4.

For at least these reasons, the rejection of claim 4 is not supported by the cited art and removal thereof is respectfully requested. Claims 10 and 26 are also not anticipated by Chirashnya for similar reasons.

Regarding claim 5, contrary to the Examiner's assertion, Chirashnya does not teach a host computer system configured, in part, to "determine an acceptable exposure period, wherein the risk of the network system becoming unavailable during the acceptable exposure period is lower than the threshold value, and provide an indication of the acceptable exposure period". The Examiner is incorrect in asserting that paragraphs 0020, 0022, 0027, 0054 and 0063 of Chirashnya teach the combination of limitations of claim 5. None of the cited portions, or any other portion of Chirashnya, teach determining an acceptable exposure period with a lower risk of the network system becoming unavailable than a threshold risk value, and providing an indication of the acceptable exposure periods. The "updated probabilities" of paragraph 0027 refer to probabilities of malfunctions of individual components, not "risks of the network system becoming unavailable" during specific "exposure periods". Furthermore, "providing an explanation of the diagnosis," as taught in paragraph 0027, is clearly different from "providing an indication of an acceptable exposure period". Paragraph 0063 teaches "Preferably, the user defines two threshold levels that are applied to each module: a lower threshold, at which a module is flagged as 'fault-suspect,' and a higher threshold, at which a suspect module is reclassified as non-suspect. The thresholds relate to the difference between the assessed malfunction rate of each module and its expected failure rate based on system specifications." These "two threshold levels" of paragraph 0063 clearly have nothing to do with determining an acceptable exposure period or providing an indication of such an acceptable exposure period, as recited in claim 5.

In his Answer, the Examiner cites paragraphs [0053], [0054], and [0063], wherein Chirashnya "discusses an MTBF, and a confidence probability related to it. If the actual

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MTBF drops below the MTBF threshold (10^8, in this example) with more than a 10% confidence, the module is flagged. As such, the acceptable exposure period is simply the MTBF. The confidence percentage governs the risk that the module may drop below that acceptable MTBF." Appellant asserts that the Examiner has misinterpreted these passages of Chirashnya. Paragraph [0063] does not describe a case in which the MTBF may be considered to be an acceptable exposure period, as the Examiner suggests. This paragraph describes that if there is a more than 10% chance that the MTBF has drop below the threshold, this indicates that failures are happening more frequently than the threshold. In this case, there would be a 90% probability that the component will fail within the MTBF. An exposure period, as used in Appellant's specification, and as acknowledged by the Examiner in remarks regarding claim 4 above, may be defined as "a finite time period beginning after the component failure is detected" (see, e.g., paragraph [0021] of the published application). An acceptable exposure period is, thus, a period following a component failure during which the risk of system failure is lower than a threshold risk (see, e.g., paragraph [0028] of the published application.) This is certainly not analogous to the MTBF (mean time between failures), nor would one expect their values to be correlated at all.

Appellant further asserts that there is nothing in Chirashnya that teaches determining an acceptable exposure period. **While it may be possible to use some of the information collected in the system of Chirashnya to determine such a period, there is nothing in Chirashnya that teaches that any of the information is, in fact, used in this way.** Claim 5 is therefore clearly not anticipated by Chirashnya and removal of the rejection thereof is respectfully requested.

For at least these reasons, the rejection of claim 5 is not supported by the cited art and removal thereof is respectfully requested.

Regarding claim 6, contrary to the Examiner's assertion, Chirashnya does not teach "wherein the host computer system is configured to update the availability of the

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network system by calculating the instantaneous availability of the plurality of network components". The Examiner suggested that Chirashnya teaches this limitation in paragraphs 0011 and 0048. The Examiner is incorrect in this interpretation as well. Chirashnya does not teach a host updating the availability of the network system anywhere, and so cannot teach that the network system availability is updated by calculating the instantaneous availability of the plurality of network components, as recited in claim 6.

In his Answer, the Examiner states, "given that the causal network continually updates, an instantaneous availability is constituted." Appellant asserts that, as discussed at length above, Chirashnya does not teach updating the "availability the network system" as defined in Appellant's specification. In addition, merely updating a collection of malfunction rates for individual components does not teach updating this "availability of the network system" by calculating the availability of the plurality of components, or by any other method.

For at least these reasons, claim 6 is clearly not anticipated by Chirashnya and removal of the rejection thereof is respectfully requested.

With respect to claim 11, the Examiner is mistaken in asserting that paragraph [0054] of Chirashnya teaches the limitation of "wherein a first exposure period of the one or more exposure periods is an estimated time to replace the one of the components that failed". Chirashnya does not mention estimated times to replace components anywhere, much less setting an exposure period in a table to the estimated time to replace a failed component.

In his Answer, the Examiner suggests, "the MTBF after an alarm indicates the amount of time available to replace that component before it fails, which constitutes an estimated time to replace the failed components (see paragraph 0063)." The Examiner seems to interpret this limitation to mean that the first exposure period is an estimate of

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the window of time available to replace a component before it fails (again). It is not. It is an estimate of how long it might take to replace a failed component (as plainly stated). Appellant asserts that paragraph [0063] says nothing about the MTBF being used in this way (as an estimated time to replace a component.) In fact, it would not make sense for the MTBF to be used as a window during which the component may be replaced. For example, if the component has already failed and is being replaced, it should not matter how soon the component might have failed again. The decision to replace it has been made, based on the fact that it is likely to fail again soon. It also would not make sense to use the MTBF as an estimate of how long it might take to replace a failed component. A component may fail often or frequently, but this has no correlation with how long it would take to replace it. Paragraph [0063] teaches neither of these things.

Instead, this paragraph describes that the MTBF is monitored so that if it drops below a given threshold (i.e., if failures are occurring more rapidly than at the threshold rate) the component may be flagged as fault-suspect. This paragraph also describes that the threshold (and confidence level) at which a component may be flagged may be set "depending on the cost of replacing or otherwise servicing the FRU in question weighed against the seriousness of the consequences of a failure of the module while the network is operating." Therefore, this paragraph does not describe using the MTBF as an estimated time to replace a failed component, as the Examiner suggests, but describes using changing MTBF rates to determine when a failed module should be replaced. **Appellant again asserts that Chirashnya does not teach a first exposure period is an estimated time to replace the one of the components that failed, as recited in claim 11.**

For at least these reasons, claim 11 is clearly not anticipated by Chirashnya and removal of the rejection thereof is respectfully requested. Claim 31 is also not anticipated by Chirashnya for similar reasons.

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Regarding claim 12, contrary to the Examiner's assertion, Chirashnya clearly fails to disclose the limitation "the program instructions are computer executable to evaluate the risk of the network system being disrupted by comparing the risk of the network system being disrupted for at least one of the one or more exposure periods to a threshold risk" in paragraphs [0047] and [0063]. Paragraph [0047] does describe setting error thresholds used in deciding when to generate an alarm in response to a suspected error in an individual component. Paragraph [0063] describes both a lower threshold (indicating a "fault suspect") and an upper threshold (indicating that a suspect module should be reclassified as non-suspect). However, these thresholds relate to mean time between failure (MTBF) rates, not risk levels. Neither of these citations discloses evaluating a risk of the network being disrupted, comparing this risk to a threshold risk, or the network system being disrupted during at least one of one or more exposure periods (i.e., periods after detection of a failed component) as recited in claim 12.

Regarding claim 13, contrary to the Examiner's assertion, Chirashnya clearly fails to disclose the limitation "the program instructions are computer executable to store an indication of an unacceptably high risk in response to the risk of the network system being disrupted for at least one of the one or more time periods being greater than the threshold risk" in paragraph [0048]. This paragraph describes event collectors, which gather system events on various nodes and send them to a primary event collector for processing. Thus, this passage describes actions taken after occurrence of an actual system event. This clearly has nothing to do with a risk of a network system disruption, or with storing an indication of an unacceptably high risk, much less with storing such an indication in response to the risk of the network system being disrupted being greater than a threshold risk, as recited in claim 13.

Regarding claim 14, contrary to the Examiner's assertion, Chirashnya clearly fails to disclose the limitation "the indication of the unacceptably high risk includes an indication of an acceptable exposure period" in paragraph [0054]. This passage describes a fault model that includes all types of possible malfunctions (where "malfunctions" refers to the root cause of a fault in a module) and their expected failure rates, such as the

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mean time between failures for these root causes. It does not describe an indication of an unacceptably high risk (of the network system being disrupted) at all, much less one including an indication of an acceptable exposure period, (i.e., a period following a component failure during which the risk of system failure is lower than a threshold risk), as recited in claim 14.

Regarding claim 15 and contrary to the Examiner's assertion, Chirashnya clearly fails to disclose the limitation "the program instructions are computer executable to provide the acceptable exposure period to a monitoring service" in paragraph [0059]. This passage describes "a recommendation and explanation generator" receiving malfunctions assessments for the modules in the network and comparing them against expected failure rates to determine a recommended action, such as running additional diagnostics or replacing the module. This has nothing to do with providing an acceptable exposure period (included in an indication of an unacceptably high risk) to a monitoring service, as recited in claim 15.

In his Answer, the Examiner submits that, as per claims 12, 13, 14, and 15, Chirashnya "discusses evaluating the risk, such that if the MTBF falls below a threshold, with a confidence probability associated with it. If the confidence probability of the MTBF reaches a level higher than the set threshold, the component is flagged (it has an unacceptably high risk). The probabilities and parameters continually change during the exposure periods, and are thus clearly stored for the system to have functionality (0053, 00054, 00063). The system as a whole provides a monitoring service, where the MTBF is held as a threshold value, below which the actual value may not drop (above a certain confidence level). Because action is taken if this happens, the provision of the acceptable exposure period to a monitoring service also takes place."

Appellant asserts that the Examiner has again misinterpreted these passages in Chirashnya. As discussed above, Chirashnya describes storing malfunction rates and confidence levels for each component of a system, and determining when to flag a component as "fault-suspect" based on these parameters (i.e., flagging the component

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may be used to indicate that there is a high probability that the component is likely to fail again soon and/or often.) It does not teach anything about evaluating the risk of the network system being disrupted, as the Examiner suggests. While it may be possible to use the stored information for various purposes, there is nothing in Chirashnya that teaches that any of this information (or any other information) is used for evaluating the risk of the network system being disrupted by comparing the risk of the network system being disrupted for at least one of the one or more exposure periods to a threshold risk, as recited in claim 12, or by any other means. In addition, as discussed above, the MTBF rates for the components are clearly not analogous to "an indication of an acceptable exposure period," and nothing in Chirashnya describes that they are used to determine an acceptable exposure period. Instead, they (and their changes) are used to determine when to flag a component for possible replacement based on the likelihood that the component is likely to fail. The thresholds referred to in these passages are thresholds for MTBF rates and/or confidence levels for individual components, not a threshold risk of the network system being disrupted. Similarly, nothing in Chirashnya teaches: storing an indication of an unacceptably high risk in response to the risk of the network system being disrupted (as in claim 13) or an indication of an acceptable exposure period (as in claim 14), as suggested by the Examiner. Therefore, Appellant asserts that Chirashnya cannot be said to anticipate claims 12, 13, and 14.

Further regarding these claims, nothing in Chirashnya teaches providing the acceptable exposure period to a monitoring service (as in claim 15). The Examiner's suggestion that, "Because action is taken if this happens, the provision of the acceptable exposure period to a monitoring service also takes place" is completed unsupported in the cited art. Taking action if the MTBF and/or confidence level meets certain criteria (the action being, for example, flagging a component as fault-suspect, or replacing a component) has nothing to do with providing an acceptable exposure period to a monitoring service, as these parameters and the described actions have nothing to do with an acceptable exposure period. As discussed above, the MTBF rates do not define acceptable exposure periods for the system. Therefore, Appellant asserts that Chirashnya cannot be said to anticipate claim 15.

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For at least the reasons above, the rejection of claims 12, 13, 14, and 15 is not supported by the cited art and removal thereof is respectfully requested. Claims 27, 28, 29, and 30 are also not anticipated by Chirashnya, for similar reasons.

Regarding claim 22 and contrary to the Examiner's assertion, Chirashnya fails to disclose the limitation "the program instructions are computer executable to compute the availability of the network system by computing the instantaneous availability of the network system" in paragraph 0010. This passage describes estimated malfunction rates of a given module exceeding a threshold, resulting in the system declaring the module to be fault-suspect. It does not describe that such a declaration has anything to do with the availability of the network system, nor that such availability is computed instantaneously or otherwise.

In his Answer, the Examiner submits, "Chirashnya teaches the computing of instantaneous availability. Further, Chirashnya's system is continually updating to reflect the latest network conditions, so instantaneous availability if disclosed." Appellant asserts, however, that as discussed above, Chirashnya does not teach computing the network system availability, as defined in Appellant's specification, much less instantaneous availability of the network system. Instead Chirashnya teaches updates to a Bayesian network, which is clearly not the availability of Appellant's claimed invention. Thus, Chirashnya clearly does not anticipate claim 22.

For at least the reasons above, the rejection of claim 22 is not supported by the cited art and removal thereof is respectfully requested. Claim 33 is also not anticipated by Chirashnya for similar reasons.

Second Ground of Rejection:

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Claims 16-19, 32, 37 and 38 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Chirashnya. Appellant respectfully traverses this rejection for at least the following reasons.

With respect to claims 16-19, and 32, the Examiner asserted that the features of claims 16-19 and 32 "constitute a design choice rather than a patentable distinction." Appellant asserted, in the Appeal Brief, that the Examiner repeatedly failed to state proper grounds for rejection. All inventions constitute design choices made by the inventors. The statute clearly places a burden of proof on the Patent Office that requires the Examiner to produce a factual basis for his rejection of an application under sections 102 and 103. *In re Warner*, 154 USPQ 173, 177 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968).

In his Answer, the Examiner submits, "Chirashnya teaches the use of Bayesian analyses and Poisson analyses to calculate the availability of the network." This is incorrect. Appellant asserts that Chirashnya teaches these analyses are used to diagnose the causes of detected faults in a system. As discussed at length above, Chirashnya does not teach calculating "the availability of the network," as defined in Appellant's specification.

The Examiner further submits, "It can reasonably be assumed that one of ordinary skill in the art at the time of the invention would have thought to use other forms of statistical analyses to put the invention into practice. Because reliability block, fault tree, Monte Carlo, and Markov chain analyses are other types of statistical analyses, it would have been obvious to one of ordinary skill in the art at the time of the invention, in view of Chirashnya's use of the Bayesian and Poisson analyses." Appellant asserts, however, that since Chirashnya does not use these types of statistical analyses to calculate the availability of the network, applying other types of statistical analyses to the teachings of Chirashnya would also not teach the limitations of these claims. Instead, these techniques would be applied to the diagnosis of the causes of detected faults.

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For at least these reasons, the rejection of claims 16-19, and 32 is unsupported by the cited art and removal thereof is respectfully requested.

Third Ground of Rejection:

Claims 20 and 21 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Chirashnya in view of Rogers (U.S. Publication 2003/0048782). Appellant respectfully traverses this rejection for at least the following reasons.

With respect to claims 20 and 21, in response to the Office Action dated May 18, 2005, Appellant had indicated **two** requirements that had to be met for Rogers' teachings to qualify as prior art. These two requirements were: first, that the Examiner must show that the subject matter on which the Examiner is relying on to reject Appellant's claims is also present in Rogers' provisional application or Rogers' parent utility application, and second, that at least one claim of Rogers' published application is supported (under 35 U.S.C. § 112) in a respective one of the priority applications that also includes the subject matter relied upon for the rejection. In the Final Action and again in the Advisory Action, the Examiner addressed the first requirement, stating "that the provisional application contains the exact same teachings as the published Rogers application used to reject claims 20 and 21", **but does not address the second requirement.** In regard to the first requirement, Appellant notes that, contrary to the Examiner's statement, the text of the provisional application does not appear to be identical to the text of the published application. The Examiner has not pointed out the specific portions of the provisional application that contain the subject matter relied upon in the rejection. **In regard to the second requirement, the Examiner has not even attempted to show that at least one claim of Rogers' published application is supported (under 35 U.S.C. § 112) in a respective one of the priority applications that also includes the subject matter relied upon for the rejection. Thus, the Examiner has not met the burden required to qualify the use of Rogers as prior art, and the rejection of claims 20 and 21 remains improper.** For each and every limitation of at least one claim of Roger's

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published application, the Examiner must specifically identify in the priority document complete § 112 support. Otherwise, Rogers cannot be asserted as prior art. For at least these reasons, removal of the rejection of claims 20 and 21 was respectfully requested.

Appellant asserts that the Examiner's remarks in his Answer still fail to show that at least one claim of Rogers' published application is supported in the priority document, as he has still failed to specifically identify, for each and every limitation of at least one claim, complete § 112 support. For example, in remarks regarding claim 20, the Examiner refers only to broad concepts that are taught in both the provisional application and the published application, but does not specifically identify where these concepts are disclosed in each application. **None of the Examiner's remarks refer to specific limitations of any of the claims of Rogers. Nor does the Examiner point out the specific pages or paragraphs of Rogers' provisional application that contain the required support. Thus, Appellant asserts that the Examiner has still not met his burden required to qualify the use of Rogers as prior art, and the rejection of claims 20 and 21 remains improper.**

Fourth Ground of Rejection:

Claim 39 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chirashnya in view of Noy (U.S. Publication 2003/0051049). Appellant respectfully traverses this rejection for at least the following reasons.

First, the Examiner has not shown Noy to be a prior art reference. More specifically, Noy is a published U.S. patent application that was filed on Aug. 13, 2002, after Appellant's filing date of Mar. 6, 2002. Noy does claim the benefit of a provisional application filed Aug. 15, 2001. However, the filing date of the provisional application can only be used as Noy's prior art date for the subject matter that is common to both the published application and the provisional application. Since it is common practice for a later filed utility application to include more or different subject matter than its earlier

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provisional application, it is unclear whether the material in Noy relied upon by the Examiner was actually present in Noy's provisional application. In fact, a quick review of Noy's provisional application shows that it varies greatly from Noy's published application. Therefore, Appellant asserted that the Examiner must show that the subject matter on which the Examiner is relying on to reject Appellant's claims is also present in Noy's provisional application. Because the Examiner failed to make this showing, the rejection is clearly improper. *See, In re Wertheim*, 209 USPQ 554 (CCPA 1981).

Moreover, Noy's published application is not entitled to the filing date of the provisional application unless at least one claim of Noy's published application is supported (under 35 U.S.C. § 112) in the provisional application. Under 35 U.S.C. 119(e)(1) and/or 120, a published utility application is not entitled to its priority application's filing date as a prior art date unless at least one claim of the published utility application is supported (per 35 U.S.C. § 112) in the priority application. The rejection is improper unless the Examiner can show that Noy's published application has the necessary claim support in the provisional application. *See also* M.P.E.P. § 2136.03(IV).

The Examiner has the burden of proof to produce the factual basis for the rejection. *In re Warner*, 154 USPQ 173, 177 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968). **Since the Examiner has not proven that both of the above requirements have been met for Noy's teachings to qualify as prior art, Appellant asserted that Examiner has not met this burden of proof and that the rejection is improper.**

In his Answer, the Examiner merely states, "The claims of the Noy publication discusses the concepts of service provisioning by request, which is the same subject matter disclosed in the provisional application. As such, Appellant's assertion that the Noy publication and provisional application differ is fallacious. The teaching relied upon in rejecting claim 39, namely the requesting of an identification of a network component, is clearly taught in both the provisional application and the published application." However, Noy's provisional application varies greatly from Noy's published application.

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Appellant's do not find the specific corresponding material in Noy's provisional application. Nor has the Examiner pointed to any particular paragraph or page of Noy's provisional application.

Further regarding claim 39, the Examiner asserted that, while Chirashnya "does not specifically teach that system discovery entails sending a request for identification of the network component, and returning an identifier in response", Noy teaches "the unique identification of a network component by request (0008)". Appellant asserts that the Examiner is mistaken in his interpretation of this passage of Noy. Claim 39 recites "wherein said performing system discovery comprises sending a request for identification data to a particular network component of the plurality of network components; and the particular network component returning a unique identifier in response to the request for identification". Noy teaches sending a path discovery request, not a request for identification data of the network component, in paragraph [0008]. Appellant asserts that this is very different from a host sending a request for identification data to a network component as part of performing system discovery. In fact, paragraph [0008] of Noy does not describe returning an identifier of a network component at all, but instead describes returning an identifier list "identifying a destination-DC-to-current-DC **path** from a destination device component to the device component at which the path termination signal is received, and the destination-DC-to-current-DC path having a destination-DC-to-current-DC cumulative weight." This clearly does not teach the above referenced limitation of claim 39.

Therefore, even if there were sufficient motivation to combine the cited references, the combination clearly does not teach all of the limitations of claim 39.

For at least the reasons cited above, the rejection of claim 39 is unsupported by the art cited by the Examiner even if Noy were properly qualified as prior art, and removal thereof is respectfully requested.

Fifth Ground of Rejection:

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Claim 40 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chirashnya in view the Examiner's "Official Notice".

With respect to claim 40, the Examiner cited paragraph 0009 of Chirashnya as teaching "wherein said detecting the failure comprises monitoring performance of one of the components", and takes Official Notice that "inclusion of a threshold value to determine component failure is well known in the art, wherever network performance is being monitored". Pursuant to M.P.E.P. § 2144.03, Appellant had traversed the Examiner's taking of Official Notice. Appellant asserts that "determining that one of the network components has failed if the performance of one of the components falls below a threshold" as recited in claim 40 is not "well known in the art". Appellant asserted that the Examiner failed to provide documentary evidence for the Official Notice taken in the rejection of this claim, and that, therefore, pursuant to M.P.E.P. § 2144.03, the rejection of claim 40 must be withdrawn.

In addition, while paragraph 0009 of Chirashnya teaches that "standard reliability theory techniques are based on sampling device performance under known conditions", this is not the same as the detection of a failure of a component comprising "monitoring performance of the component", as recited in claim 40. Appellant asserts that determining reliability and determining an actual failure are clearly two different things.

In his Answer, the Examiner states, "As described above, Chirashnya is replete with examples of teachings of the monitoring of performance of one of the components. Further, Chirashnya teaches an MTBF falling below a certain threshold (0053, 0054, 0063), and if the confidence related to this becomes to high, action is deemed necessary, which constitutes the component failing." First, Appellant notes that this is in direct contradiction with Examiner's remarks in the Final Action mailed November 2, 2005, in which he states that Chirashnya "does not specifically teach the determination that a component has failed if its performance falls below a threshold." Second, the Examiner's conclusion is incorrect. Paragraph [0063] does not teach that if these conditions apply,

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this constitutes an indication that a component has failed, as the Examiner suggests. Instead, it teaches that under these conditions, the component may be flagged as "fault-suspect" and further action or analysis may or may not be taken.

In addition, the Examiner has not cited any of the alleged numerous examples of monitoring performance that he claims are included in Chirashnya. Instead, he only describes monitoring a MTBF rate (i.e., a failure rate) for a component. Appellant asserts that monitoring failures of a component is clearly not the same as monitoring performance of a component (i.e., performance of a component that is at least partially functional) to detect that a component (e.g., the same component or another component) has failed. Therefore, Appellant asserts that Chirashnya does not teach or suggest this limitation of claim 40. Also, The Examiner has never provided any support for his Official Notice.

For at least the reasons above, the rejection of claim 40 is unsupported by the cited art and removal thereof is respectfully requested.

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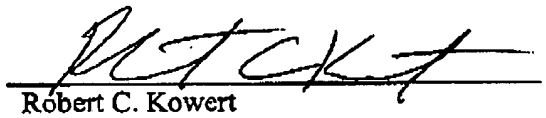
CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1-40 is erroneous, and reversal of his decision is respectfully requested.

The Commissioner is authorized to charge any fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-10100/RCK.

Respectfully submitted,



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